

AMENDMENTS TO THE CLAIMS

1. (previously presented) A method for modifying contractility of the heart of a patient, comprising:

receiving signals from a sensor coupled to the body of the patient indicative of physiological activity;

analyzing the signals to derive a measure of the physiological activity; and

applying excitable tissue control (ETC) stimulation to the heart so as to enhance contractility of the heart muscle responsive to the measure.

2-27. (canceled)

28. (previously presented) A method according to claim 1, wherein analyzing the signals comprises assessing heart rate variability of the patient, and wherein applying the ETC stimulation comprises applying the ETC stimulation responsive to the heart rate variability.

29. (previously presented) A method according to claim 28, wherein applying the ETC stimulation comprises increasing intensity of the ETC as an inverse function of the heart rate variability.

30. (currently amended) Apparatus according to claim 39 [[12]], wherein the measure includes heart rate variability of the patient's heart, and wherein the control unit applies the ETC signals responsive to the heart rate variability.

31. (previously presented) Apparatus according to claim 30, wherein the control unit increases intensity of the ETC signals as an inverse function of the heart rate variability.

32. (new) A method according to claim 1, wherein applying the stimulation comprises applying electrical signals to stimulate the heart and controlling intensity of the signals responsive to the measure.
33. (new) A method according to claim 32, wherein controlling the intensity comprises regulating a duty cycle of the signals relative to a beat rate of the heart.
34. (new) A method according to claim 1, wherein applying the stimulation comprises assessing the measure so as to determine in which of a plurality of predetermined ranges the measure falls, and varying the application of the ETC stimulation dependent on the range.
35. (new) A method according to claim 34, wherein assessing the measure comprises setting upper and lower thresholds with respect to the measure, and wherein varying the application of the stimulation comprises holding off the stimulation when the measure is outside a range between the thresholds.
36. (new) A method according to claim 34, wherein assessing the measure comprises associating one or more of the ranges with respective types of physical activity undertaken by the patient, and wherein varying the application comprises adapting the stimulation to a demand level associated with the physical activity.
37. (new) A method according to claim 1, wherein the measure comprises a heart rate.
38. (new) A method according to claim 1, wherein receiving the signals comprises receiving a signal responsive to motion of the patient.

39. (new) Apparatus for stimulating cardiac tissue in the body of a patient, comprising:

at least one sensor, coupled to the body which generates signals indicative of physiological activity;

one or more stimulation electrodes, which are placed in contact with the heart; and

an electrical control unit, which receives and analyzes the signals from the sensor so as to derive a measure of the physiological activity and which applies an excitable tissue control (ETC) signals to the stimulation electrodes so as to enhance contractility of the heart muscle responsive to the measure.

40. (new) Apparatus according to claim 39, wherein the control unit varies an intensity of the signals responsive to the measure.

41. (new) Apparatus according to claim 40, wherein the control unit varies the intensity by regulating a duty cycle of the signals relative to a beat rate of the heart.

42. (new) Apparatus according to claim 39, wherein the control unit assigns the measure to one of a plurality of predetermined ranges and varies the application of the ETC signals dependent on the range.

43. (new) Apparatus according to claim 42, wherein one or more of the ranges are associated with respective types of physical activity undertaken by the patient, and the control unit adapts the stimulation to a demand level associated with the physical activity.

44. (new) Apparatus according to claim 39, wherein the measure comprises a heart rate.

45. (new) Apparatus according to claim 39, wherein the at least one sensor comprises an accelerometer.

46. (new) Apparatus according to claim 39, wherein the at least one sensor comprises a sensing electrode.

47. (new) Apparatus according to claim 46, wherein the sensing electrode comprises one of the stimulation electrodes.